

Ordering Information

SKU	Description	UPC
100849	Filter Bank Module	628693723077

Description

The Nooelec Ham Filter Bank is a very high performance module designed to enhance the reception in five ham radio bands. With advanced filtering technology, it delivers exceptional signal isolation and improved signal selectivity.



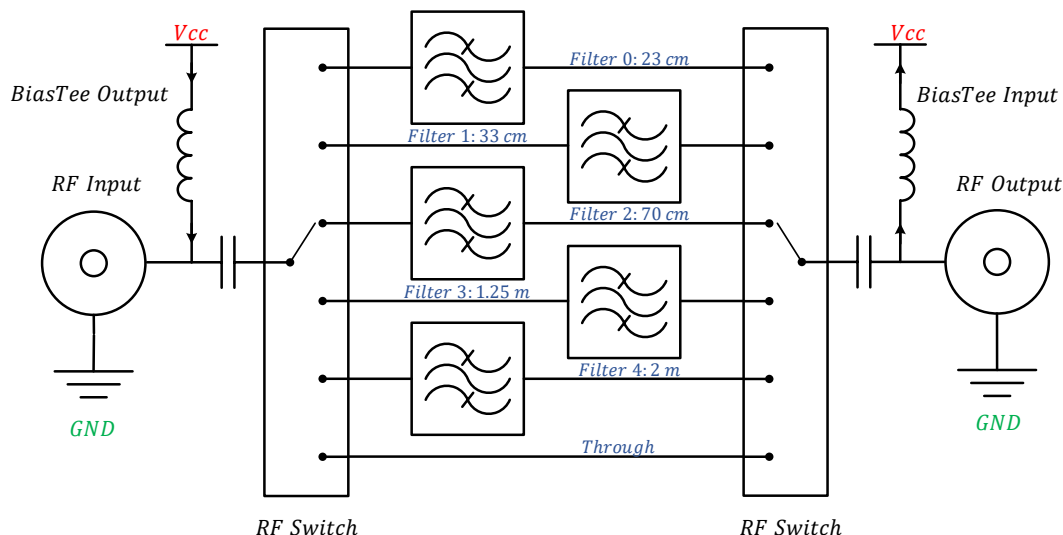
Features

- Five ham radio channels
- High interference rejection
- Low insertion loss
- 50Ω RF block
- +3.3V-5V single supply
- 15mA nominal current draw

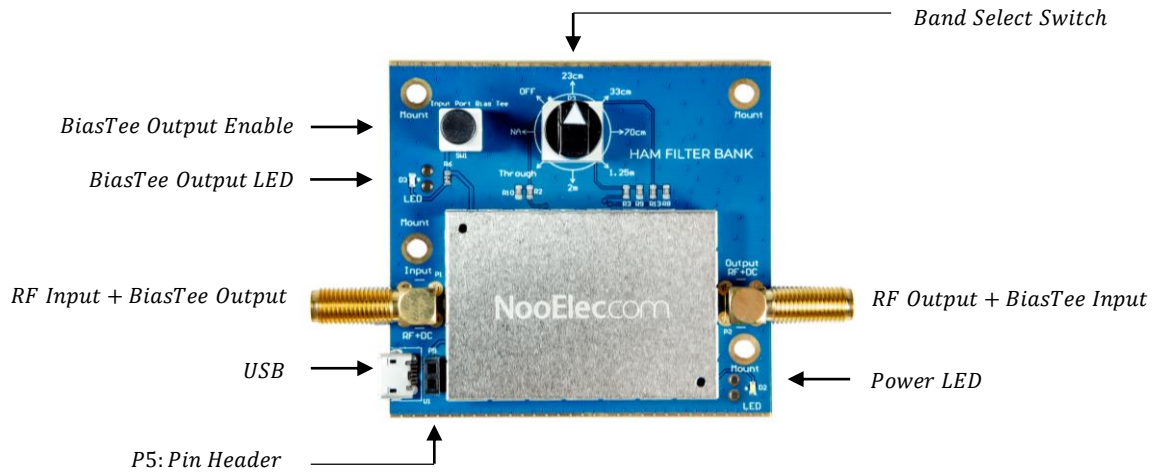
Applications

- Ham radio communication
- Software defined radio
- Selective signal processing
- Transceiver protection
- Test and measurement

Simplified Schematic



Pin Configuration and Functions



Pin	Function	Type	Description
V_{in}	Voltage Input	Input	DC power input pin*
GND	Common Ground	-	RF and DC reference voltage

* Ham Filter Bank allows for 3 different power options (USB, BiasTee, and pin header). Only 1 power option should be used at any given time

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Input Voltage	V_{in}	3.3	5	5.5	Volts
Input Power	P_{in}	-	-	0	dBm

Electrical Specifications

Test Conditions unless otherwise specified: $V_{in} = +5$ Vdc, 50 Ohm system.

Parameter	Symbol	Min	Typical	Max	Unit
Output P1dB	OP1dB	-	10	-	dBm
Total Noise Figure	NF	2.7	3	-	dB
Supply Current	I_{supply}	5	15	25	mA

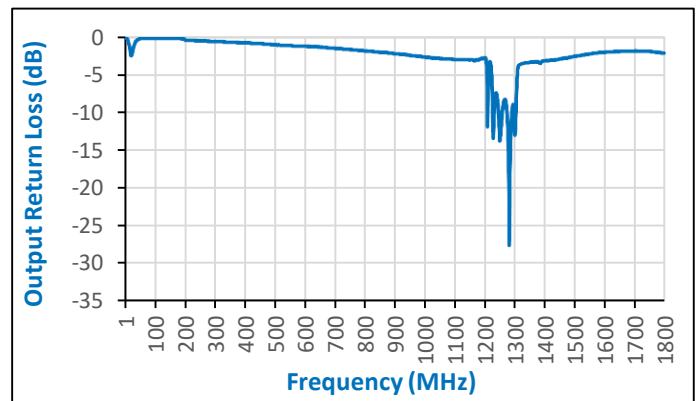
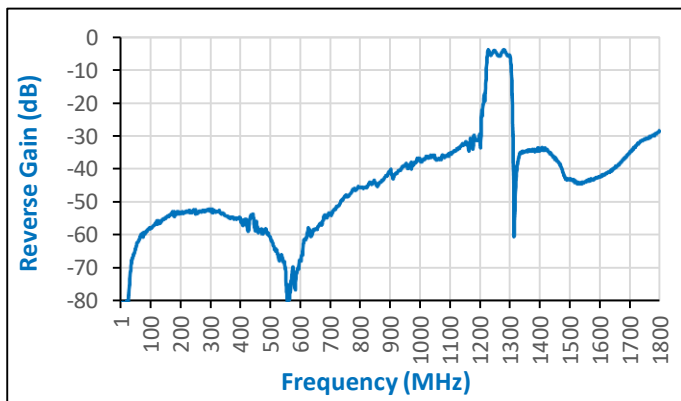
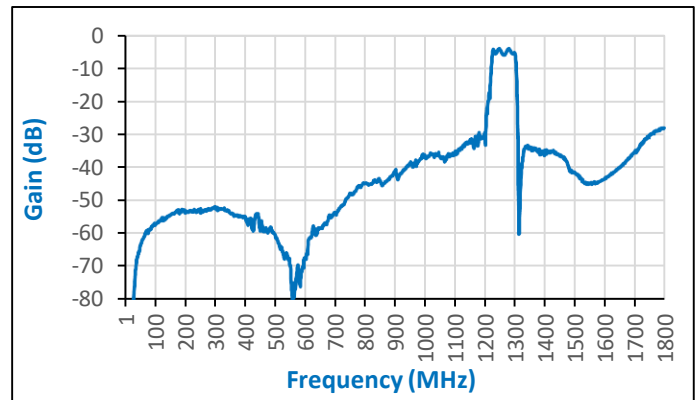
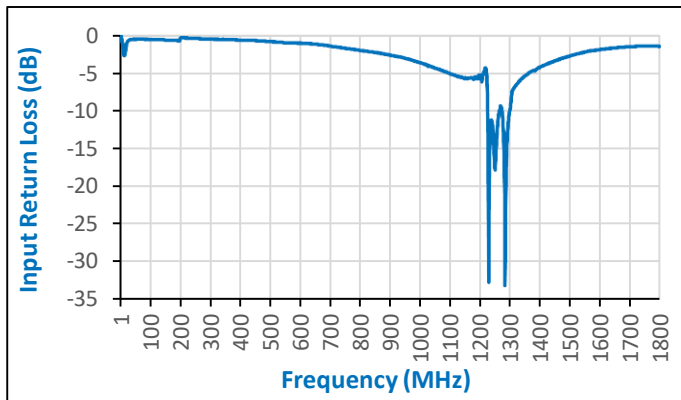
Filters Specifications

Test Conditions unless otherwise specified: $V_{in} = +5 \text{ Vdc}$, 50 Ohm system.

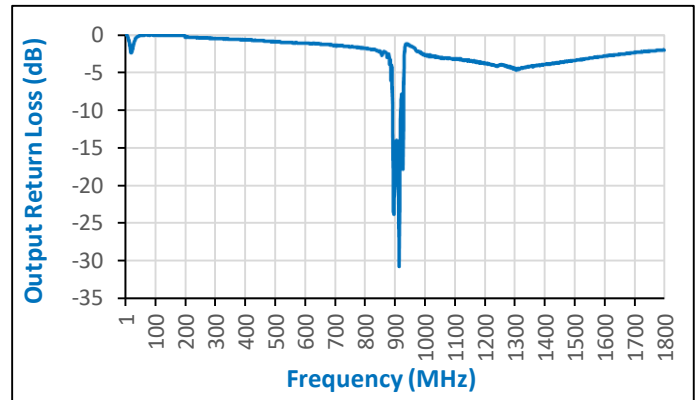
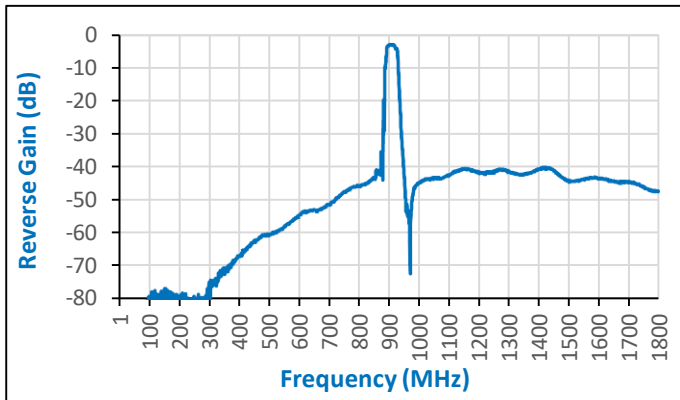
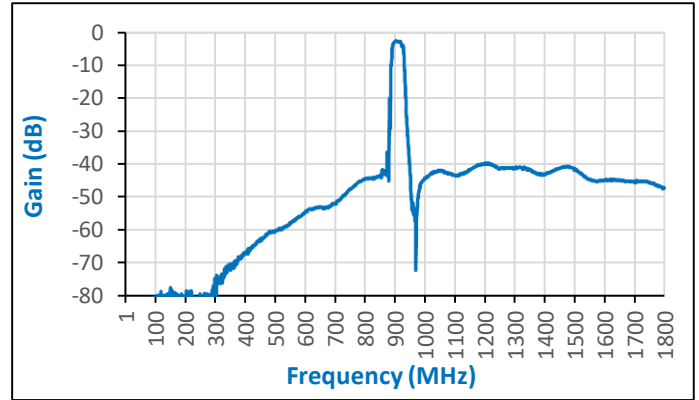
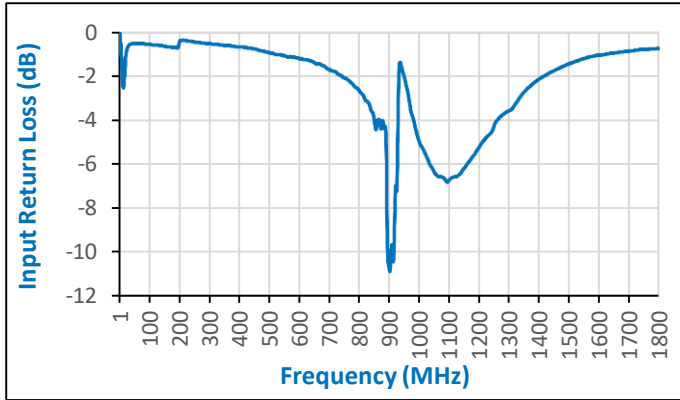
Filter	Position	Center Frequency	Bandwidth	Insertion Loss
23 cm	0	1265 MHz	80 MHz	3.9 dB
33 cm	1	910 MHz	39 MHz	2.8 dB
70 cm	2	436 MHz	32 MHz	2.7 dB
1.25 m	3	222 MHz	11 MHz	3.1 dB
2.00 m	4	146 MHz	7 MHz	3.0 dB

Electrical Characteristics Plots (1 MHz to 1800 MHz)

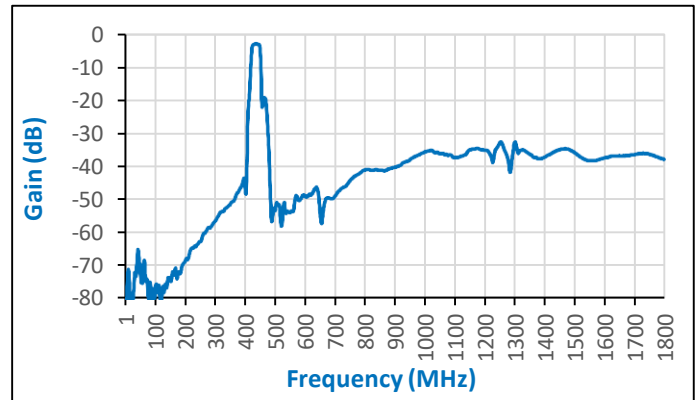
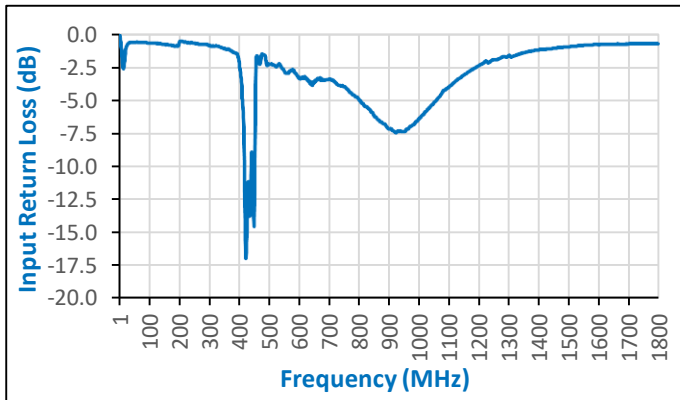
Position 0: 23 cm band

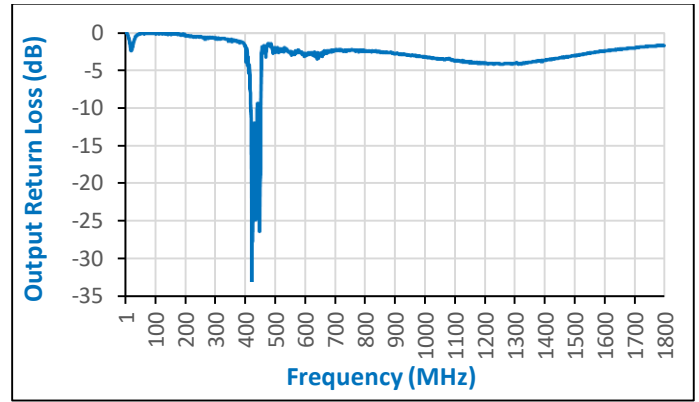
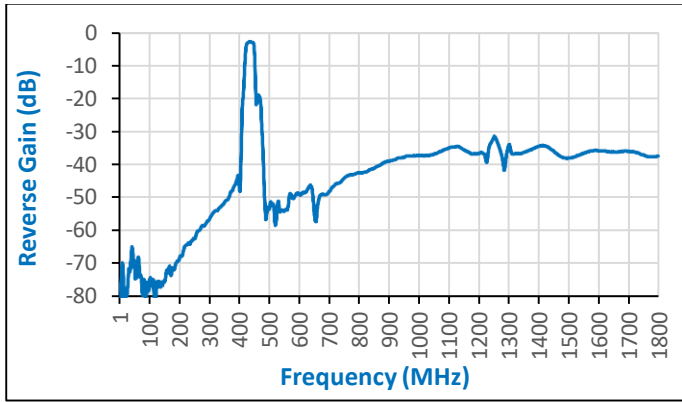


Position 1: 33 cm band

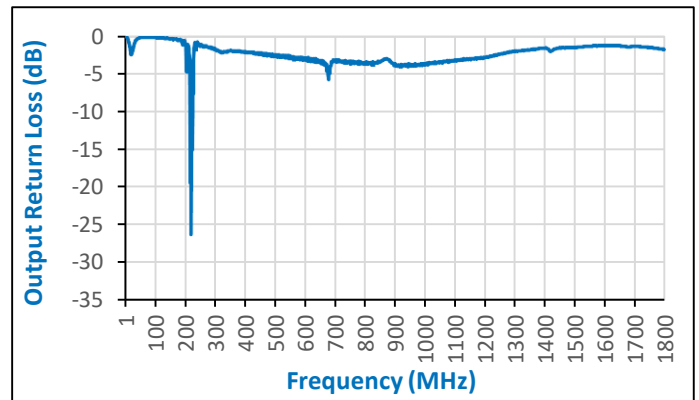
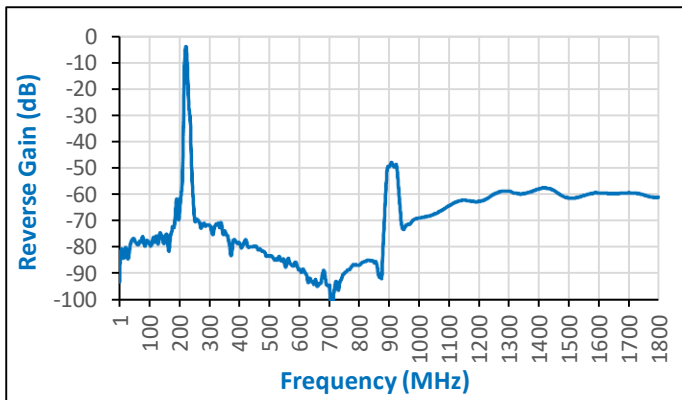
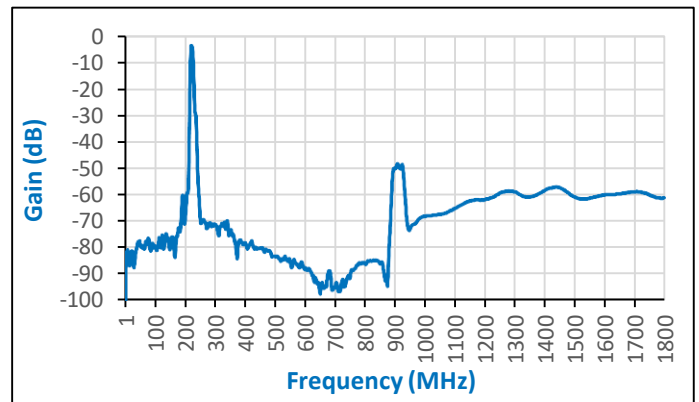
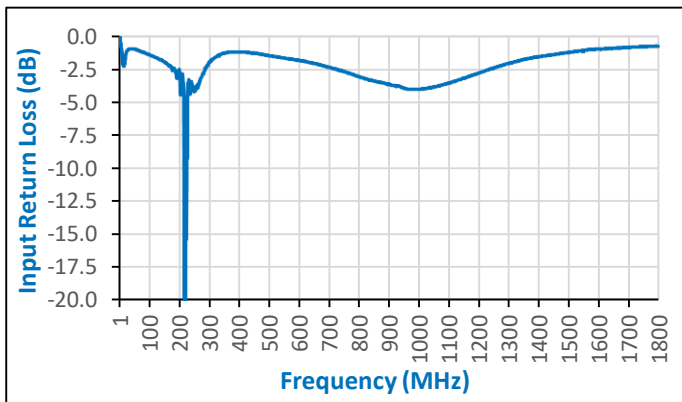


Position 2: 70 cm band

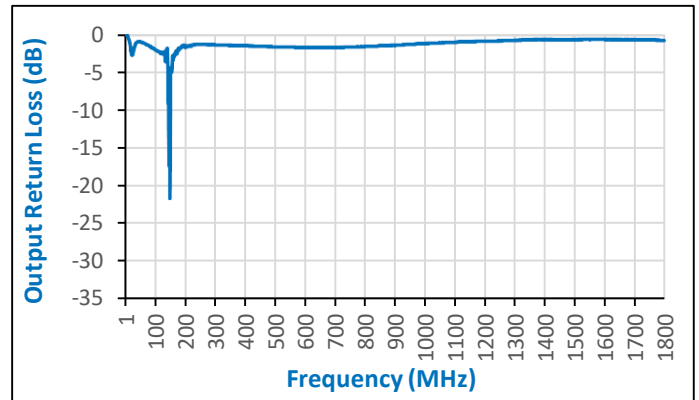
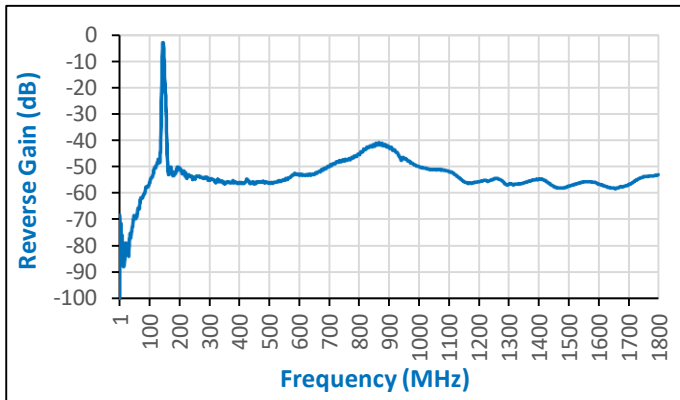
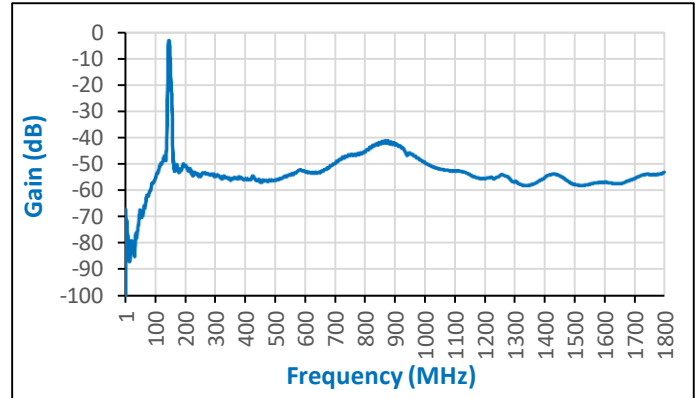
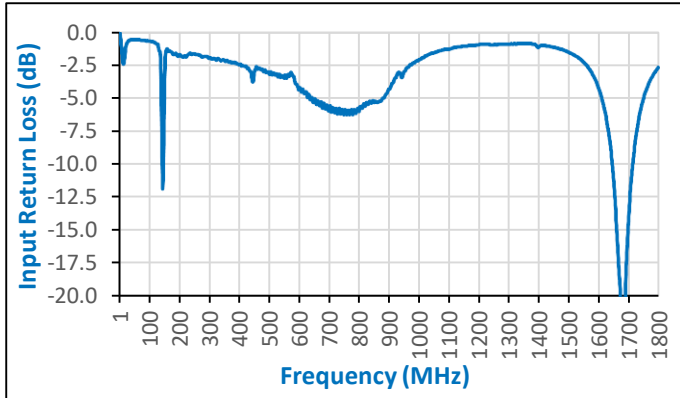




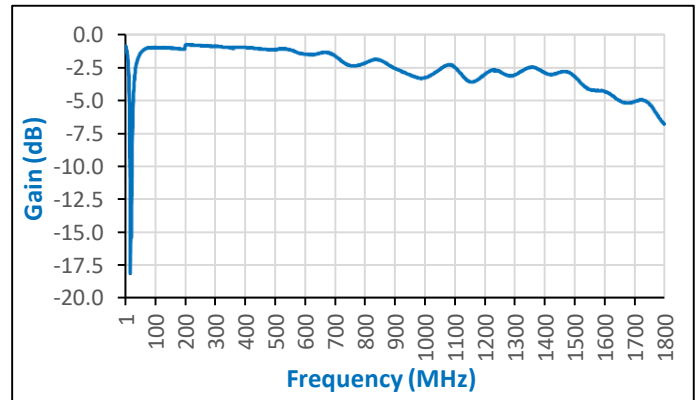
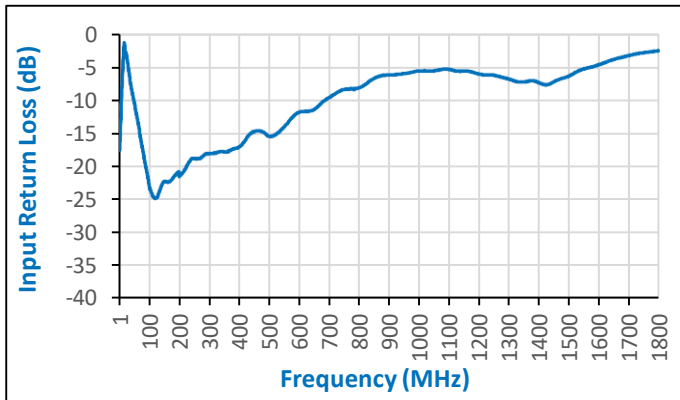
Position 3: 125 cm band

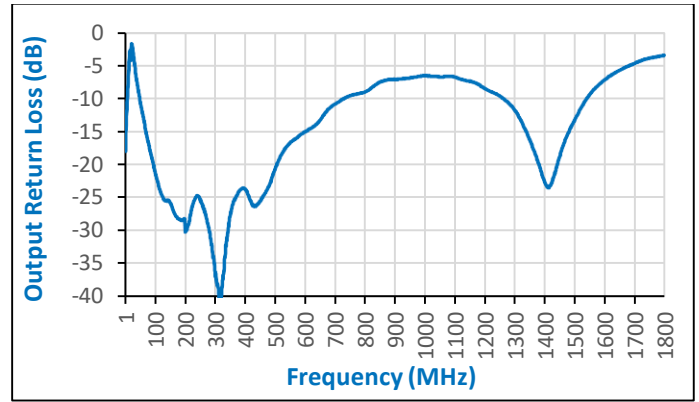
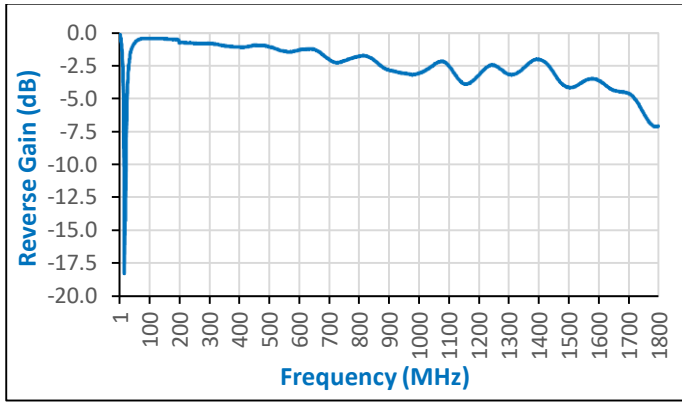


Position 4: 200 cm band

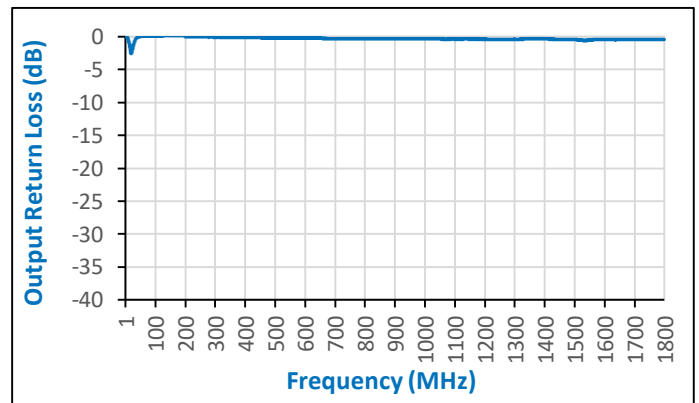
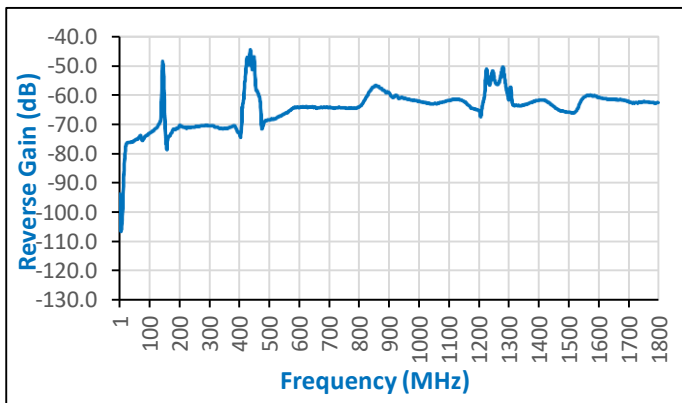
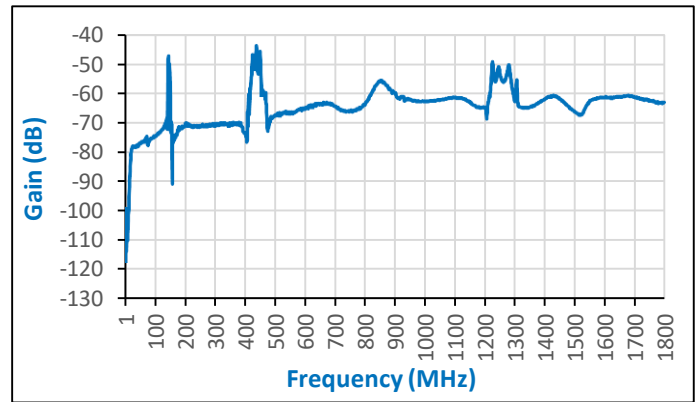
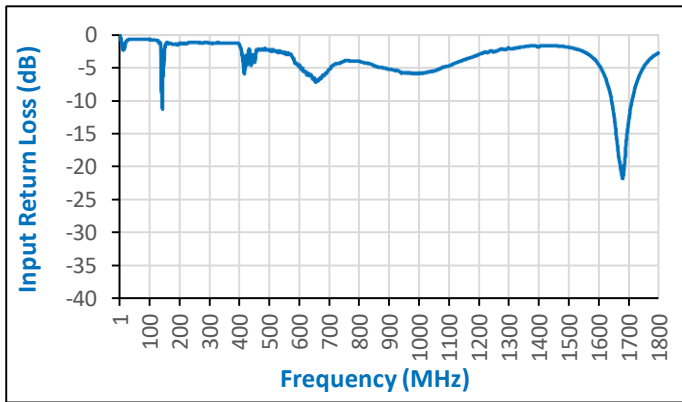


Position 5: Through

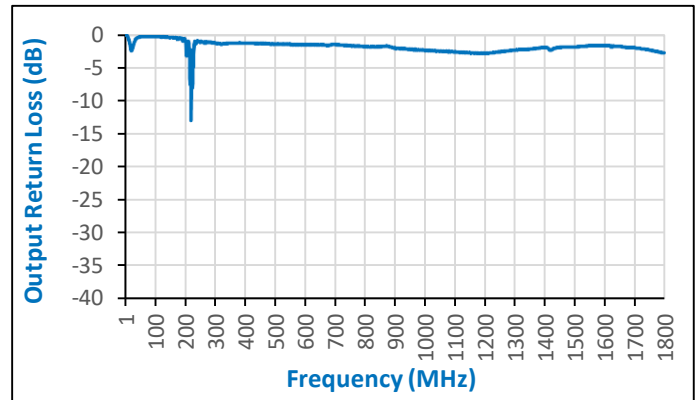
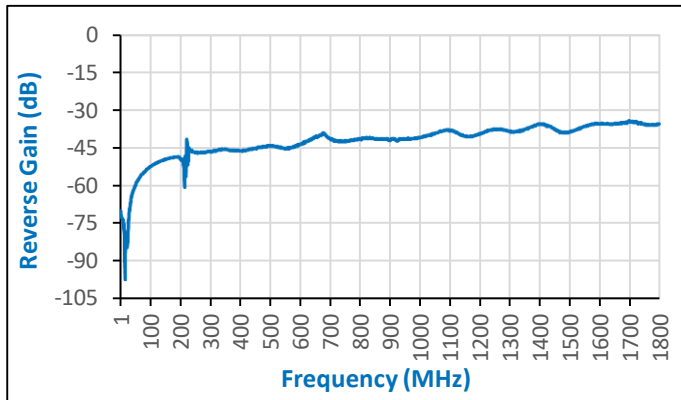
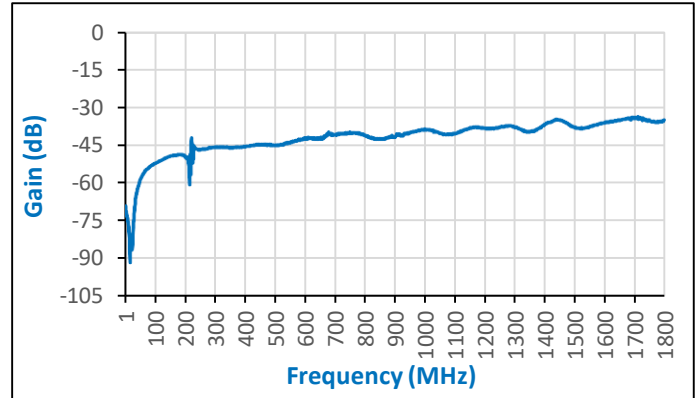
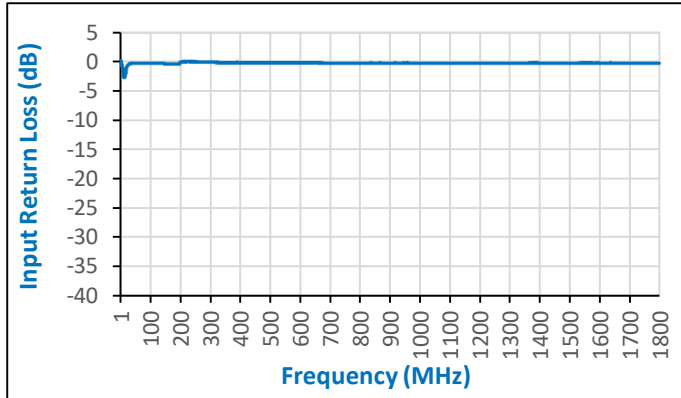




Position 6: NA



Position 7: OFF



Physical Specifications

The physical specifications were measured with the device in an enclosure.

Parameter	Value	Unit
Length	89 (3.50)	Millimeter (Inch)
Width	60 (2.26)	Millimeter (Inch)
Height	13 (0.51)	Millimeter (Inch)
Weight	20 (0.04)	Gram (Pound)

Accessories



LaNA HF	Nooelec NESDR SMARt v5 SDR	SMA Attenuator Kit
SKU: 100838	SKU: 100701	SKU: 100815